

Amendments to the Claims:

- 1 1. (original) A method for automatically generating a network replication topology for
2 use by a directory service in replicating a directory, comprising the computer-
3 implemented steps of:
4 reading a plurality of router configuration files; and
5 generating the network replication topology representing one or more sites and one or
6 more site links based on information in the plurality of router configuration
7 files.
- 1 2. (original) The method of claim 1, wherein the information in the plurality of router
2 configuration files includes router interface information and the step of generating the
3 network topology is performed based on the router interface information.
- 1 3. (currently amended) The method of claim 2, wherein the step of generating the
2 network topology comprises:
3 determining at least one site by identifying a sub-network on a Local Area Network
4 (LAN) interface; and
5 generating a site reference for each site.
- 1 4. (currently amended) The method of claim 2, wherein the step of generating the
2 network topology comprises:
3 determining at least one site link by identifying a Wide Area Network (WAN)
4 interface; and
5 generating a site link reference for each site link.

1 5. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:
3 determining at least one site by identifying a router interface with a bandwidth
4 exceeding a predefined threshold value; and
5 generating a site reference for each site.

1 6. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:
3 determining at least one site link by identifying a router interface with a bandwidth
4 not exceeding a predefined threshold value; and
5 generating a site link reference for each site link.

1 7. (currently amended) The method of claim 1, wherein the step of generating the
2 network topology comprises:
3 determining at least one site link by identifying a router interface with a packet round-
4 trip-time exceeding a predefined threshold value; and
5 generating a site link reference for each site link.

1 8. (original) The method of claim 1, further comprising a computer-implemented step of:
2 reading preprocessing information, the preprocessing information including override
3 information for nullifying the information associated with a same one or more
4 sites or site links from the plurality of router configuration files, wherein the
5 network topology is generated based additionally on the override information.

- 1 9. (original) The method of claim 1, wherein the step of reading a plurality of router
2 configuration files includes reading from a network management system.
- 1 10. (original) The method of claim 1, wherein the step of reading a plurality of router
2 configuration files includes reading from a router query result.
- 1 11. (original) The method of claim 1, further comprising the computer-implemented steps
2 of:
3 storing the replication topology in a database; and
4 copying the replication topology from the database to the directory service.
- 1 12. (original) The method of claim 11, wherein the directory service is Active Directory
2 and the one or more site links is an Active Directory site link.
- 1 13. (original) The method of claim 11, wherein the directory service is Active Directory
2 and the one or more sites is an Active Directory site.
- 1 14. (original) A computer-readable medium carrying one or more sequences of
2 instructions for automatically generating a network topology for a directory service,
3 wherein execution of the one or more sequences of instructions by one or more
4 processors causes the one or more processors to perform steps of:
5 reading router interface information from a plurality of router configuration files;
6 generating the network topology representing one or more network sites and one or
7 more network site links based on the router interface information.

1 15. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the step of generating the network topology by causing the one
4 or more processors to perform a step of:

5 generating at least one site reference by identifying a sub-network on a Local Area
6 Network (LAN) interface.

1 16. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the step of generating the network topology by causing the one
4 or more processors to perform steps of:

5 generating at least one site link reference by identifying a Wide Area Network (WAN)
6 interface.

1 17. (original) The computer-readable medium of claim 14 wherein execution of the one or
2 more sequences of instructions by one or more processors causes the one or more
3 processors to perform the steps of:

4 storing the replication topology in a database; and
5 copying the replication topology from the database to the directory service.

1 18. (original) The computer-readable medium of claim 14, wherein the directory service is
2 Active Directory and the one or more site links is an Active Directory site link.

1 19. (original) The computer-readable medium of claim 14, wherein the directory service is
2 Active Directory and the one or more sites is an Active Directory site.

1 20. (currently amended) A computer system that ~~can~~ automatically generates a network
2 replication topology for use by a directory service in replicating a directory, the
3 system comprising:
4 a network interface; and
5 one or more processors connected to the network interface, the one or more
6 processors configured for
7 reading router interface information from a plurality of router configuration files;
8 generating a network topology representing one or more network sites and one or
9 more network site links based on the router interface information.

1 21. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for generating the network topology by generating one or more network
4 site references by identifying a sub-network on a Local Area Network (LAN)
5 interface.

1 22. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for generating the network topology by generating one or more site link
4 references by identifying a Wide Area Network (WAN) interface.

1 23. (original) The computer system of claim 20 wherein the network topology is
2 generated for use with a directory service and the one or more processors are further
3 configured for:

storing the replication topology in a database; and

copying the replication topology from the database to the directory service.

24. (currently amended) An apparatus that ~~can~~ automatically generates a network topology for use in replicating a directory associated with a directory service, the apparatus comprising:
 means for reading a plurality of router configuration files; and
 means for generating the network topology representing one or more sites and one or more site links based on information in the plurality of router configuration files.

25. (original) The apparatus of claim 24, further comprising:
 means for determining at least one site by identifying a sub-network on a Local Area Network (LAN) interface.

26. (original) The apparatus of claim 24, further comprising:
 means for determining at least one site link by identifying a Wide Area Network (WAN) interface.

27. (original) The apparatus of claim 24, further comprising:
 means for storing the replication topology in a database; and
 means for copying the replication topology from the database to the directory service.

28. (new) The method of Claim 1, further comprising:
 reading a list of one or more router names from a source, wherein the source is a network management system, a database, or a router query result;

4 generating a router name from the router configuration file associated with each of the
5 one or more routers;
6 comparing the one or more router names from the router configuration files to the list
7 of one or more router names from the source, and
8 upon a router name from the router configuration files not being in the list of one or
9 more router names from the source, generating an exception.

1 29. (new) The method of claim 28, further comprising:
2 generating a temporary site name for each router name from the router configuration
3 file associated with each of the one or more routers; and
4 associating each of the one or more site references determined from the router
5 configuration file associated with each of the one or more routers with the
6 temporary site name for the associated router.

1 30. (new) The method of claim 29, further comprising:
2 generating a partial site link for each of the one or more site link references
3 determined from the router configuration file associated with each of the one
4 or more routers; and
5 associating each partial site link with the temporary site name for the associated
6 router.

1 31. (new) The method of claim 30, further comprising:
2 generating a sub-network reference based on each of one or more "ip route"
3 commands in the router configuration file associated with each of the one or
4 more routers; and

5 associating each sub-network reference with the temporary site name for the
6 associated router.

1 32. (new) The computer-readable medium of Claim 14, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 reading preprocessing information, the preprocessing information including override
4 information for nullifying information associated with one or more sites or
5 one or more site links from one or more router configuration files;
6 wherein generating the network topology is based additionally on the override
7 information.

1 33. (new) The computer-readable medium of claim 32, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 reading a list of one or more router names from a source, wherein the source is a
4 network management system, a database, or a router query result;
5 generating a router name from the router configuration file associated with each of the
6 one or more routers;
7 comparing the one or more router names from the router configuration files to the list
8 of one or more router names from the source, and
9 upon a router name from the router configuration files not being in the list of one or
10 more router names from the source, generating an exception.

1 34. (new) The computer-readable medium of claim 33, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:

3 generating a temporary site name for each router name from the router configuration
4 file associated with each of the one or more routers; and
5 associating each of the one or more site references determined from the router
6 configuration file associated with each of the one or more routers with the
7 temporary site name for the associated router.

1 35. (new) The computer-readable medium of claim 34, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 generating a partial site link for each of the one or more site link references
4 determined from the router configuration file associated with each of the one
5 or more routers; and
6 associating each partial site link with the temporary site name for the associated
7 router.

1 36. (new) The computer-readable medium of claim 35, wherein the instructions, when
2 executed by one or more processors, cause the one or more processors to perform:
3 generating a sub-network reference based on each of one or more "ip route"
4 commands in the router configuration file associated with each of the one or
5 more routers; and
6 associating each sub-network reference with the temporary site name for the
7 associated router.

1 37. (new) The computer system of Claim 20, wherein the one or more processors are
2 further configured for:

3 reading preprocessing information, the preprocessing information including override
4 information for nullifying information associated with one or more sites or
5 one or more site links from one or more router configuration files; and
6 wherein generating the network topology is based additionally on the override
7 information.

1 38. (new) The apparatus of Claim 20, further comprising:

2 means for reading preprocessing information, the preprocessing information including
3 override information for nullifying information associated with one or more sites
4 or one or more site links from one or more router configuration files; and
5 wherein the means for generating the network topology comprises means for generating
6 the network topology based additionally on the override information.